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10/563,496	01/03/2006	Peng Sun	14981-53500	8267
24728 7590 12/10/2009 MORRIS MANNING MARTIN LLP 3343 PEACHTREE ROAD, NE 1600 ATLANTA FINANCIAL CENTER ATLANTA, GA 30326				
EXAMINER KIM, STEVEN S				
ART UNIT 3685		PAPER NUMBER		
NOTIFICATION DATE 12/10/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/563,496

**Applicant(s)**

SUN, PENG

**Examiner**

STEVEN KIM

**Art Unit**

3685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the amendment dated 8/18/2009 (hereinafter "amend0809").

### ***Status of Claims***

2. Claims 1-3, 5, 7, and 8 have been amended.
3. Claims 4, 6, and 9-12 have been canceled.
4. Claims 1-3, 5, 7, and 8 have been examined and are pending.

### ***Foreign Priority***

5. Acknowledgement is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the instant application, filed on 1/03/2009.

### ***Response to Argument(s)/Amendment(s)***

6. Substitute Specification

Applicant has submitted a substitute specification in order to comply with 37 CFR 1.52(a) and (b) as required by examiner in the previous office action. The substitute, however, introduces new matter into disclosure (see below for detail). Hence, the submitted substitute specification is objected.

7. 35 USC 112 and 103

Applicant has significantly amended the claims. The claim amendment, however, is replete with indefinite language, and also includes features not supported in

the original written description (see below for detail). Furthermore, the Applicant's 103 rejection argument is based on the indefinite nature of the amendment. Additionally, the argument(s) are moot in view of the new ground(s) of rejection.

### ***Specification***

8. The amendment filed 5/18/2009 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.

The newly amended specification includes matters that were not originally disclosed; e.g. see at least "recording online time" (see page 1, ¶01), "time recording" (see page 2, ¶01), "recording the amount of online" (see page 3, ¶02), "b) providing a fee calculation server in connection with the broadband access server for recording the amount of online time of the user and starting recording the online time of the user by the fee calculation service when receiving an instruction ..." (see page 3, ¶05), "in one embodiment, when the circular link list is not fully filled, step (d) further comprises the step of saving the newly detected data flow as the content of the head pointer, and moving the head and tail ..." (see page 5, ¶01).

Applicant is required to review the amendment and to cancel the new matter in the reply to this Office Action.

***Admitted Prior Art***

9. According to the MPEP (608.01(c)(2)), Applicant's Background of the Invention describes to the extend practical the state of the prior art known to the Applicant. Therefore, in light of Applicant's "Background" the following is considered as admitted prior art. Furthermore, the following assertion(s) of face have gone unchallenged and are therefore considered admitted prior art:

- Conventional detection methods of the IDLE state are in such way that a timer is directly configured such that data flow of a user is detected periodically at each interval so as to decide whether an increment between the user's data flow and the last check point is less than a threshold; that if the increment is not greater than the threshold, the user is considered offline, otherwise the user is considered online or downloading;
- Disclosure where the time interval for IDLE detection is about 5 minutes and techniques of reducing of the time interval for efficiency and better accuracy;
- circular link list is old and well known programming technique.

***Claim Rejections - 35 USC § 112, 1<sup>st</sup> paragraph***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-3, 5, 7, and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The independent claim 1 has been amended to include: "providing a fee calculation server in communication with the broadband access server for recording the amount of online time of the user and starting recording the online time of the user by the fee calculation service when receiving an instruction of the broadband access server after the user access the broadband access server and is authenticated successfully" and "stopping recording the online time of the user by the fee calculation service according to an instruction of the broadband access server". These elements were not included in the original written description. For example, Examiner was not able find "a fee calculation server", "fee calculation service", "recording the amount of online time" in the original written description.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> paragraph***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-3, 5, 7, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
14. The claim(s) are replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively

specified. The structure must be organized and correlated in such a manner as to present a complete operative device.

15. Claim 1 recites "setting an inner time interval for monitoring a data flow of the user in the broadband access server, an outer time interval for detecting an IDLE state outside the broadband access server and a flow threshold for counting the data flow of the user in the broadband server, and the inner time interval being shorter than the outer time interval". It is unclear to one of ordinary skill in the art whether the relationship of recited "in the broadband access server" to preceding language. For example, is the setting done in the broadband access server, monitoring done in the broadband server, or describing data flow, e.g. in the broadband access server? Similarly, "an outer time interval for detecting an IDLE state *outside the broadband access server* and a flow threshold for counting the data flow of the user *in the broadband server*" (emphasis added) is unclear. Additionally, the claim recites "inner time interval for monitoring a data flow", "outer time interval for detecting an IDLE state", and "a flow threshold for counting the data flow" as described above. This would suggest that inner time interval, outer time interval, and the flow threshold each has specific intended use, e.g. for monitoring a data flow, for detecting an IDLE state, or for counting the data flow respectively. The claim, however, is directed to establishing a circular link list with number of element for recording the data flow; wherein the element is directly functional to the outer time interval and the inner time interval. The claim is further directed to using the circular link list and the flow threshold in "deciding the user" in IDLE state. In another word, the inner time interval and the outer time interval are

used for recording the data flow. The inner time interval, the outer time interval, and the flow threshold are used for detecting IDLE state. This is contrary to what was claimed earlier. Hence, the scope of the claim is unclear.

16. Moreover, the independent claim 1 has been amended to recite "providing a fee calculation server in communication with the broadband access server for recording the amount of online time of the user and starting recording the online time of the user by the fee calculation service when receiving an instruction of the broadband access server after the user access the broadband access server and is authenticated successfully" (underline represent newly added language). Webster's New Collegiate Dictionary, Copyright 1981 by G & C Merriam Co., defines "provide" as "to supply for use". Hence, it is unclear to one of ordinary skill in the art whom or what device is performing the step of "providing a fee calculation server in communication with the broadband access server". Additionally, it is unclear what recited "fee calculation service" is. For example, a device or organization? Moreover, it is unclear what or whom is "receiving an instruction of the broadband access server". Recited "starting recording" and "an instruction of the broadband access server" are unclear. Also, the claim is missing an essential positively recited step of "authenticating the user". The claim also recites "for recording the amount of online time of the user and starting recording the online time of the user by the fee calculation ...". The relationship between the two recited recording is unclear. For example, if the recording is different then what performs the first recited recording?



17. An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed. See *In re Zletz*, 13 USPQ2d 1320 (Fed. Cir. 1989).

18. Continuing on claim 1, the recited "wherein the element number of the circular link list is the *number of times of the outer time interval to the inner time interval*" (emphasis added) is unclear.

19. Claim 1 also recites "d) repeatedly detecting the data flow of the user in the broadband access server at each inner time interval in the access server, and recording the detected data flow as a content of a head pointer of the circular link list in turn, until a difference between the newly detected data flow and the content recorded in the head pointer is not more than the flow threshold". Is detecting performed "in the broadband access server" or is "in the broadband access server" describing the data flow? Furthermore, the claim recites "repeatedly detecting". Is the recited "recoding" also repeatedly performed at each inner time interval? In another words, the timing of the recited "recording the detected data flow as a content of a head pointer" is not recited in the claim. The step is also missing an essential step of comparing the detected data flow and the content recorded in the head pointer and comparing the result to the flow threshold.

20. Claim 1 also recites "e) deciding the user in the IDLE state in the broadband access server when the difference between the newly detected data flow and the content recorded in the head pointer is less than the flow threshold". The recited "deciding the user in the IDLE state" is unclear. For example, "the user in the IDLE

state" suggests description of user prior to "deciding". The step is also missing an essential step of comparing the detected data flow and the content recorded in the head pointer and comparing the result to the flow threshold.

21. Moreover, claim 1 recites "f) stopping recording the online time of the user by the fee calculation service according to an instruction of the broadband access server". The recited "stopping recording" is unclear. Furthermore, recited "fee calculation service" is unclear as described above. Additionally, "according to an instruction of the broadband access server" is unclear. For example, is the broadband access server sending an instruction to stop recording?

***Claim Rejections - 35 USC § 103***

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**23. Claims 1-3, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (hereinafter “APA”) in view of US Patent Application 2007/0159971 (hereinafter “Zhang”).**

24. APA discloses methods of the detecting IDLE state in such way that a timer is directly configured such that data flow of a user is detected periodically at each interval so as to decide whether an increment between the user's data flow and the last check point is less than a threshold and that if the increment is not greater than the threshold, the user is considered offline, otherwise the user is considered online or downloading. Further the Admitted Prior Art discloses where the time interval for IDLE detection is about 5 minutes. Moreover, the Admitted Prior Art discloses reducing of the time interval, i.e. from 5 minutes to less, for efficiency and better accuracy.

25. APA also discloses using a circular link programming technique. However, APA does not disclose using the circular link programming technique in detecting IDLE state. However, it would have been obvious to one of ordinary skill in the art, e.g. one of ordinary skill in the art of computer and programming, to use various programming technique, including a circular link list which yield predictable results. “The claimed improvement is no more than simple substitution of one known element for another, or mere application of known technique to piece of prior art ready for improvement” - *Ex parte Smith*, 83 USPQ2d 1509 (Bd. Pat. App. & Int. 2007).

26. APA does not specifically disclose a fee calculation server in communication with the broadband access server. However, Zhang discloses a fee calculation server in communication with the broadband access server (see Fig. 1, Broadband Access

Server and AAA server). Zhang further discloses authentication of user, Broadband Access Server performing metering for the network use, and calculation of access charge for the subscriber by the fee calculation server (see ¶0005-¶0006). It would have been obvious to one of ordinary skill in the art to include the broadband access system taught by Zhang to APA since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

27. Furthermore, in regards to claims 1, 2, and 3, the Applicant is directed to the use of conditional language. The recited "when" do not move to distinguish the claimed invention from the cited art. These phrases are conditional limitations with the noted "when" step not necessarily performed. Accordingly, once the positively recited steps are satisfied, the method as a whole is satisfied -- regardless of whether or not other steps are conditionally invoked under certain other hypothetical scenarios. See: *In re Johnston*, 77 USPQ2d 1788 (CA FC 2006); *Intel Corp. v. Int'l Trade Comm'n*, 20 USPQ2d 1161 (Fed. Cir. 1991); MPEP §2106 II C).

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent Application 2003/0140151 discloses accounting server connected to broadband access server;

- US Patent Application 2003/0147421 discloses method and apparatus for DHCP leased time determination;
- US Patent 6,775,267 discloses method of billing for Internet broadband usage;
- US Patent 7,370,013 discloses method of billing for the usage of resources.

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN KIM whose telephone number is (571)270-5287. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:00PM).

32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Calvin Hewitt can be reached on (571)272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K./  
Examiner, Art Unit 3685

/Calvin L Hewitt II/  
Supervisory Patent Examiner, Art Unit 3685